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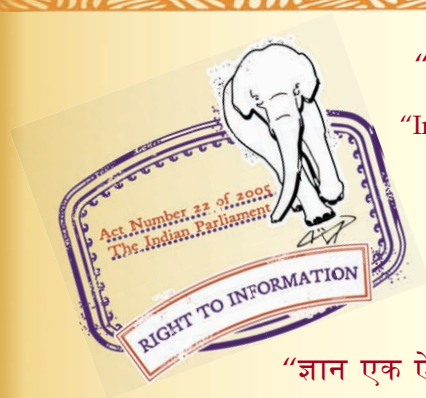
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IS 3680 (1987): Round printing ink containers [MTD 32: Metal Containers]



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“Knowledge is such a treasure which cannot be stolen”

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IS : 3680 - 1987

(Reaffirmed 2002)

Indian Standard

**SPECIFICATION FOR
ROUND PRINTING INK CONTAINERS**

(First Revision)

UDC 621.798.14 : 667.5

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BUREAU OF INDIAN STANDARDS
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

Indian Standard

SPECIFICATION FOR ROUND PRINTING INK CONTAINERS

(First Revision)

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Indian Standard

SPECIFICATION FOR ROUND PRINTING INK CONTAINERS

(*First Revision*)

0. FOREWORD

0.1 This Indian Standard (First Revision) was adopted by the Indian Standards Institution on 13 March 1987, after the draft finalized by the Metal Containers Sectional Committee had been approved by the Marine, Cargo Movement and Packaging Division Council.

0.2 This standard was first published in 1966. With the experience gained in the use of tin containers for packing of printing inks, heights of the containers has been rationalized to one only for one diameter. The other dimensions and thickness of tinplate have also been updated according to the prevalent manufacturing practices.

0.3 This standard contains 3.3.2, 3.3.3, 3.4 and 3.5 which call for agreement between the purchaser and the supplier, and which permits the purchaser to use his option for selection to suit his requirements.

0.4 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test, shall be rounded off in accordance with IS : 2-1960*. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

1. SCOPE

1.1 This standard prescribes the requirements and methods of sampling and test for round built-up slip lid containers manufactured from tinplate for packing printing inks.

2. TERMINOLOGY

2.1 For the purpose of this standard, the definitions given in IS : 1394-1984† shall apply.

*Rules for rounding off numerical values (revised).

†Glossary of terms relating to metal containers trade (second revision).

3. REQUIREMENTS

3.1 Capacity and Dimensions — The container shall be manufactured to the dimensions and capacities specified in Table 1 read with Fig. 1.

TABLE 1 CAPACITY AND DIMENSIONS

CAN REF	NOMINAL CAPACITY	*NOMINAL TRADE SIZE	NOMINAL INNER DIAMETER OF THE CAN	INTERNAL DIAMETER, $D \pm 1$	HEIGHT, $H \pm 1.5$
(1)	(2)	(3)	(4)	(5)	(6)
			mm	mm	mm
1	500 g	307	83	83.4	80
2	1 kg	404	105	105.1	121
3	2 kg	509	138	138.4	178
4	4 kg	700	174	174.1	184

*These trade sizes are being given here because the industry is currently more familiar with them. When the trade becomes familiar with metric nomenclature these trade sizes will be deleted.

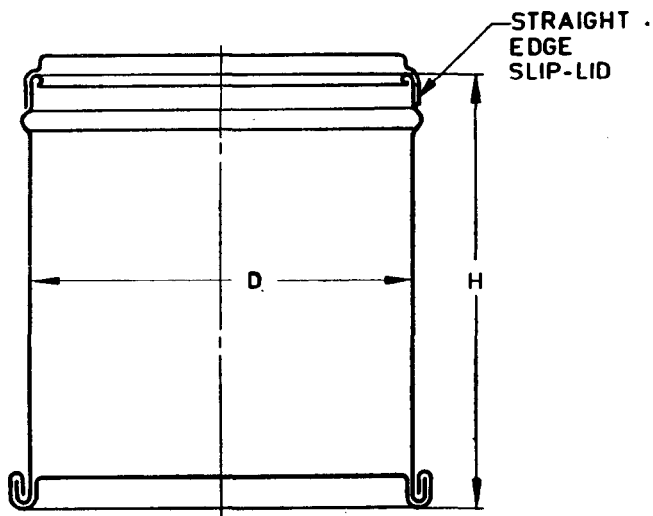


FIG. 1 ROUND PRINTING INK CONTAINER

3.2 Material

3.2.1 The components of the container shall be made from the tinplate of the thickness given in Table 2. Tolerance on nominal thickness of tinplate shall be as given in IS : 1993-1982*.

TABLE 2 MINIMUM THICKNESS OF TIN PLATE

CAN REF	NOMINAL CAPACITY	BODY mm	BOTTOM mm	SLIP LID mm
1	500 g	0.20	0.20	0.22
2	1 kg	0.21	0.20	0.24
3	2 kg	0.24	0.22	0.26
4	4 kg	0.26	0.26	0.26

3.2.2 Tin coating shall correspond to E2.8/2.8 as given in Table 1 of IS : 1993-1982* for electrolytic tinplate.

3.3 Manufacture

3.3.1 Each component shall be made from a single piece of tinplate.

3.3.2 The body seam shall be formed as shown in Fig. 2A. The seam may be soldered or glued as agreed to between the purchaser and the supplier.

3.3.3 The bottom end seam shall be double seam shown in Fig. 2B. The end seam may be soldered, compound lined or glued as agreed to between the purchaser and the supplier.

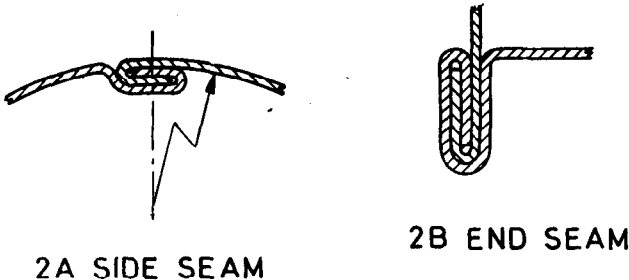


FIG. 2 SEAMS CONSTRUCTION

*Specification for cold-reduced tinplate and cold-reduced blackplate (second revision).

3.3.4 The lid shall be tight fit but can be opened easily without damaging and may be uncurred or curled as shown in Fig. 1 and 3.

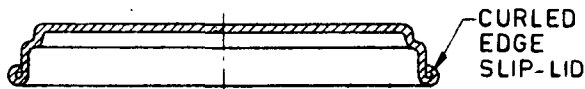


FIG. 3 SLIP-LID

3.3.5 The container shall be new and in clean condition inside and outside. It shall be free from all traces of rust and foreign matter.

3.4 Internal Finish — The internal surface of the can may be plain or given a suitable protective coating, if so required by the purchaser.

3.5 External Finish — The outside surface of the can may be given a protective or decorative coating or both, if so required by the purchaser.

3.6 Leakage Test — The can when filled with water shall not show any sign of leakage for 1 minute.

4. MARKING

4.1 The manufacturer's initials or recognized trade-mark, if any, shall be clearly and indelibly marked on the containers, if required by the purchaser.

4.1.1 The containers may also be marked with the Standard Mark.

NOTE — The use of the Standard Mark is governed by the provisions of the Bureau of Indian Standards Act, 1986 and the Rules and Regulations made thereunder. The Standard Mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard under a well-defined system of inspection, testing and quality control which is devised and supervised by BIS and operated by the producer. Standard marked products are also continuously checked by BIS for conformity to that standard as a further safeguard. Details of conditions, under which a licence for the use of the Standard Mark may be granted to manufacturers or producers, may be obtained from the Bureau of Indian Standards.

5. SAMPLING AND INSPECTION

5.1 Representative samples for lot inspection shall be drawn in accordance with IS : 3259-1966*.

5.2 The scale of sampling and permissible number of defects for visual characteristics shall be in accordance with Table 1 or IS : 3259-1966*.

*Methods for sampling of metal containers.

(Continued from page 2)

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INTERNATIONAL SYSTEM OF UNITS (SI UNITS)

Base Units

<i>Quantity</i>	<i>Unit</i>	<i>Symbol</i>
Length	metre	m
Mass	kilogram	kg
Time	second	s
Electric current	ampere	A
Thermodynamic temperature	kelvin	K
Luminous intensity	candela	cd
Amount of substance	mole	mol

Supplementary Units

<i>Quantity</i>	<i>Unit</i>	<i>Symbol</i>
Plane angle	radian	rad
Solid angle	steradian	sr

Derived Units

<i>Quantity</i>	<i>Unit</i>	<i>Symbol</i>	<i>Definition</i>
Force	newton	N	1 N = 1 kg.m/s ²
Energy	joule	J	1 J = 1 N.m
Power	watt	W	1 W = 1 J/s
Flux	weber	Wb	1 Wb = 1 V.s
Flux density	tesla	T	1 T = 1 Wb/m ²
Frequency	hertz	Hz	1 Hz = 1 c/s (s ⁻¹)
Electric conductance	siemens	S	1 S = 1 A/V
Electromotive force	volt	V	1 V = 1 W/A
Pressure, stress	pascal	Pa	1 Pa = 1 N/m ²

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